

Title (en)  
PROCESS FOR PRODUCING OXYGEN-CONTAINING UNSATURATED COMPOUND

Title (de)  
VERFAHREN ZUR HERSTELLUNG SAUERSTOFFHALTIGER UNGESÄTTIGTER VERBINDUNGEN

Title (fr)  
PROCEDE DE PRODUCTION D'UN COMPOSE INSATURE CONTENANT DE L'OXYGENE

Publication  
**EP 1346766 B1 20090211 (EN)**

Application  
**EP 01272266 A 20011220**

Priority

- JP 0111180 W 20011220
- JP 2000391078 A 20001222
- JP 2001094513 A 20010329
- JP 2001108122 A 20010406

Abstract (en)  
[origin: EP1346766A1] An object of the present invention is to provide a highly active catalyst for producing an unsaturated oxygen-containing compound from an alkane and the catalyst comprising Mo, V, Ti and Sb or Te as the indispensable active components. The preferable catalyst is represented by formula (1) or (2) as shown below, Mo<sub>1.0</sub> Va Tib Xc Yd Oe Mo<sub>1.0</sub> Va Tib Xc Yd Zf Oe wherein X represents Sb or Te; Y represents Nb, W or Zr; Z represents Li, Na, K, Rb, Cs, Mg, Ca or Sr; a, b, c, d, e and f represent atomic ratios of their respective elements, with 0<a<0.7, 0<b<0.3, 0<c<0.7, 0<=d<0.3, 0<f<0.1; e is a number determined by oxidation states of the other elements than oxygen.

IPC 8 full level  
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CPC (source: EP KR US)  
**B01J 23/002** (2013.01 - EP US); **B01J 23/18** (2013.01 - EP US); **B01J 23/22** (2013.01 - EP US); **B01J 23/28** (2013.01 - EP KR US); **B01J 27/0576** (2013.01 - EP US); **B01J 37/08** (2013.01 - EP US); **B01J 37/10** (2013.01 - EP US); **C07C 45/33** (2013.01 - EP US); **C07C 51/215** (2013.01 - EP US); **B01J 21/063** (2013.01 - EP US); **B01J 21/066** (2013.01 - EP US); **B01J 23/20** (2013.01 - EP US); **B01J 2523/00** (2013.01 - EP US)

C-Set (source: EP US)

1. **C07C 45/33 + C07C 47/22**
2. **B01J 2523/00 + B01J 2523/47 + B01J 2523/55 + B01J 2523/56 + B01J 2523/64 + B01J 2523/68**
3. **B01J 2523/00 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/56 + B01J 2523/68**
4. **B01J 2523/00 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**
5. **B01J 2523/00 + B01J 2523/13 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68 + B01J 2523/69**
6. **C07C 51/215 + C07C 57/04**
7. **B01J 2523/00 + B01J 2523/13 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/56 + B01J 2523/68**
8. **B01J 2523/00 + B01J 2523/47 + B01J 2523/48 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**
9. **B01J 2523/00 + B01J 2523/13 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**
10. **B01J 2523/00 + B01J 2523/14 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**
11. **B01J 2523/00 + B01J 2523/15 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**
12. **B01J 2523/00 + B01J 2523/47 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68 + B01J 2523/69**
13. **B01J 2523/00 + B01J 2523/13 + B01J 2523/47 + B01J 2523/48 + B01J 2523/53 + B01J 2523/55 + B01J 2523/68**

Cited by  
US8697596B2; RU2476265C2; DE112009000404T5; US8084388B2; WO2008123975A1; US7053022B2; US7718568B2

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